



City and County of the City of Chester.

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# ANNUAL REPORT

TO THE MAYOR, ALDERMEN, AND  
COUNCILLORS OF THE CITY AND  
COUNTY OF THE CITY OF CHESTER

ON THE

## HEALTH OF THE CITY IN 1926,

BY

D. RENNET, M.B.E., M.D., D.P.H.,

Medical Officer of Health.

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## Public Health Committee (1925-1926).

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THE MAYOR (COUNCILLOR J. WELSH) is an *ex-officio* Member of all Committees of the Council.

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<i>Assistant Medical Officer</i>	-	-	F. D. ROSS-KEYT, M.B., D.P.H.
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<i>Chief Clerk</i>	-	-	F. THOMAS.
<i>Assistant Clerk &amp; Additional Inspector</i>	-	-	§ W. B. CALDER, C.R.S.I.
<i>Assistant Clerk &amp; Laboratory Attendant</i> (Part Time).	-	-	E. W. BUSHELL.
<i>Sanitary Labourer</i>	-	-	F. VICKERS.
<i>Rat Catcher</i>	-	-	W. LANGRICK.

† Certificate of the Royal Sanitary Institute for Meat and Food Inspectors.

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# ANNUAL REPORT

OF THE

## MEDICAL OFFICER OF HEALTH

For the Year 1926.

1. Area (acres) .....	2862
Population (census 1921) .....	40794
Population (estimated, 1926) .....	41913
Number of inhabited houses (1921) .....	8447
Number of inhabited houses (1926) .....	8910
Number of families or separate occupiers (1921) .....	8890
Rateable value .....	£256,219
Sum represented by a penny rate .....	£961 11s. 5d.

2. The Registrar General's estimation of the population of Chester at the middle of 1926 is 41,710—only 40 more than in 1925. On making the necessary corrections for Chester residents in Institutions outside our boundaries and for non-residents within the City, the population on which birth and death rates have to be calculated becomes 41,913, a figure rather less than that for last year. The natural increase of the population—that is the excess of births over deaths—for the year is 290, so that on the Registrar General's figures we have lost 250 by the excess of emigration over immigration.

### Vital Statistics.

#### EXTRACTS FROM VITAL STATISTICS FOR THE YEAR.

			Total.		Male.	Female.			
Births	{	Legitimate	...	791	...	399	392	}	Birth-rate 19'94
		Illegitimate	...	45	...	27	18		
Deaths		...	...	546			...		Death-rate 13'0
Number of women dying in or in consequence of childbirth									
		...		...		...		{	from sepsis 1
									from other causes 1
Deaths of Infants under 1 year of age per 1,000 births—									
		Legitimate, 72'9; Illegitimate, 133'3.					Total	...	80
Deaths from Measles (all ages)							...	...	0'19
„ Whooping Cough (all ages)							...	...	0'04
Diarrhoea under 2 years of age							...	...	0'23
Deaths from Tuberculosis (all forms)							...	...	1'02
„ Diphtheria							...	...	0'02
„ Scarlet Fever							...	...	0'00



The births registered in the City during the year numbered 873, but 79 have to be deducted as not belonging to Chester and 42 added of children belonging to Chester parents but born outside the City. The net births were therefore 836, which is equivalent to a birth-rate of 19·94 per 1,000. This is 0·36 below the rate for 1925, but slightly above the rates for 1924 and 1923. Although the birth-rate in Chester is falling, as it is throughout the country, it is still substantially higher than in England and Wales as a whole, or than the rate for County Boroughs or smaller towns.

#### BIRTH-RATES.

		England and Wales.		Smaller Towns.		Chester.
1924	...	18·8	...	18·9	...	19·46
1925	...	18·3	...	18·3	...	20·30
1926	...	17·8	...	17·6	...	19·94

Of the 836 births in Chester, 45 were illegitimate, or 5·3 per cent. Last year the percentage was 4·5. In the report for 1925 the following remark was made: "This rate is stationary, and considering the moral and physical overcrowding which at present exists it is satisfactory that it has not risen."

*Deaths.*—The deaths belonging to Chester numbered 546 during the year—20 less than last year. This is equivalent to a crude death-rate of 13·0 per 1,000. The rate is still materially above that for England and Wales and for the smaller towns, but it is the lowest death-rate that we have so far had. The rate when corrected for age and sex distribution becomes 12·3 per 1,000.

The rates for England and Wales and the smaller towns are given in the following table, together with the rate for Chester for the last three years:—

		England and Wales.		Smaller Towns.		Chester.
1924	...	12·2	...	11·2	...	13·7
1925	...	12·2	...	11·2	...	13·5
1926	...	11·6	...	10·6	...	13·0

*Causes of Death.*—The chief causes of death were, in the order named, cancer, heart disease, bronchitis, tuberculous disease, and pneumonia. Those five causes together were accountable for 226 deaths, or 41 per cent. of the total. This is considerably less than last year, when the corresponding total was 257 and the

percentage 45. There is a fall in the deaths from heart disease—59 compared with 72—while there is a slight increase in both the bronchitis and pneumonia deaths. The deaths from tuberculous diseases are practically the same as last year, being, for all forms of the disease, 43 compared with 45. Infectious diseases caused 11 deaths compared with 13 in the previous year, measles having taken the place of whooping cough as the chief cause. The death-rates for some of the infectious diseases are given below, and compared with the rates for England and Wales and for the towns:—

	Death Rates per 1000 population.						Rate per 1000 Births.	
	Enteric Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria	Influenza.	Diarrhoea & Enteritis under 2 years.	Infant death rate.
England & Wales	0·01	0·09	0·02	0·10	0·07	0·22	8·7	70
County Boroughs	0·01	0·12	0·02	0·10	0·10	0·22	11·8	73
Smaller Towns ...	0·01	0·07	0·02	0·11	0·06	0·23	6·6	67
Cnester ... ..	0·00	0·19	0·00	0·04	0·00	0·19	11·9	80

*Infant Death-rate.*—There were 67 deaths of infants under 1 year, 6 more than in 1925; and as there were 15 fewer births, the rate is considerably raised, being 80 per 1,000 births. This is 8·4 above the rate for 1925, but below the average rate for the last five years. The six more deaths which this rise represents are found under a variety of causes. Compared with last year, infectious diseases caused 3 fewer deaths and respiratory diseases 2 less, but tuberculous diseases caused 3 more, diarrhoea 4 more, developmental diseases 2 more, and other causes 5 more. There is no marked difference under any one cause or group of causes, but a slight increase in various directions. The deaths from diarrhoea under 2 years of age, although only 10 in number, are particularly disappointing. Those deaths are scattered throughout the year, and are not due to the old “summer diarrhoea” but must be put down to faulty feeding. The deaths from tuberculosis, which are chiefly non-pulmonary and presumably largely due to infection through milk, ought to fall if other authorities exercise their powers under the Tuberculosis Order (1925) as is done in Chester.

# INFANT DEATH-RATE.

		England and Wales.		Smaller Towns.		Chester.
1923	...	69	...	69	...	86.2
1924	...	75	...	71	...	89.5
1925	...	75	...	74	...	71.6
1926	...	70	...	67	...	80.0

*Notifiable Infectious Diseases.*—The table at the end of Report shows the number of cases of infectious disease notified during the year, together with the deaths, shown in brackets. The total number of cases notified was 1,708, with 46 deaths, compared with 572 with 38 deaths in 1925. The difference in notifications is more than made up by the number of cases of measles and whooping cough, which became notifiable on the 1st of January.

Diphtheria was notified with equal frequency as last year (22 cases to 24). There was one death. The disease continues to be comparatively mild in character, and much less prevalent than some years ago. The bacteriological search for infectious contacts continues to be carried out.

Scarlet Fever was less prevalent than in 1925, 97 cases being notified compared with 117. The cases continue mild as scarlet fever, but a number suffered from adenitis and otorrhœa as sequelæ, and a mastoid operation had to be done in one case. There were no deaths.

Typhoid fever and para-typhoid fever.—These conditions were notified in 8 cases. Two of the cases were due to infection with the para-typhoid B. bacillus, and in neither case was the source of infection discovered. Of the true typhoid cases, one was living in a common lodging-house and having meals in various districts, particulars of which could not be obtained. Another case was constantly travelling over North Wales and district and having meals away from home very frequently. Another spent all his week-ends in the Wirral, but no case of typhoid was known in the neighbourhood. Two cases in the same family occurring towards the end of the year were definitely traced to another infected house in which the disease had not been recognised. The unrecognised cases infected four other cases before they were diagnosed, three of these being in Chester, and were notified in the current year. There were no deaths.



Pneumonia was rather more prevalent and slightly more fatal this year than last, 95 cases and 34 deaths compared with 85 cases and 31 deaths. In the first 3 years of life it was distinctly more prevalent—37 cases compared with 29, and 14 deaths compared with 12. We know that all cases are not notified, as the first intimation we have in some cases is the registrar's return of deaths. The deaths bulk too largely therefore in the figures that have been given.

Puerperal fever was notified only twice during the year. One case was mild and made an excellent recovery. The other unfortunately proved fatal.

Acute poliomyelitis.—One case of this disease was notified. It was mild in character and recovered without ill effect. The source of infection could not be traced.

Chickenpox was notified in 245 cases compared with 314 in the previous year. We continue to see practically all cases so as to guard against the introduction of smallpox.

Ophthalmia neonatorum was notified 8 times, but in swabs taken from seven of the cases the typical gonococcus was not recognised. All the cases recovered without apparent ill effects.

Cerebro spinal fever was notified once. A child of 5 months of age. No source of infection could be traced.

Measles.—This disease and also whooping cough became notifiable on 1st January. This was done in the hope that we might get better opportunity to improve the home conditions and so, along with hospital treatment for severe and complicated cases, reduce the mortality. There was a widely-spread epidemic of measles during the year, 1,070 cases coming to the notice of the department. There were 8 deaths, or 0·74 per cent. of the cases. As the number of cases in former epidemics is not known no comparison can be made, but the mortality is low. Twenty-three of the cases were treated in hospital with 2 deaths.

Whooping cough, which had been prevalent during 1925, was less so during the year. In the later months the notifications increased, and it has been again prevalent during the opening of the current year. One hundred and forty-five cases were notified during 1926. There were 2 deaths, or 1·4 per cent. Four cases were treated in hospital.

Tuberculosis was notified on 73 occasions compared with 59 in the previous year. The increase is mostly in the pulmonary form of the disease, there being 12 more cases notified and only two more in the non-pulmonary. The notifications in 1925 were the lowest for 10 years with one exception. The present year is about our average for pulmonary cases, and below the average for non-pulmonary, and in both cases below the average rates per 1,000 living in England and Wales in the last few years. The deaths numbered 43. The pulmonary form of the disease accounted for 37 and non-pulmonary 6. The rate of deaths per 1,000 living is with one exception the lowest we have had, being 0·88 for pulmonary cases, and in the non-pulmonary form the rate 0·14 is the same as last year, which was then the lowest.

A table showing the age distribution of new cases and deaths due to tuberculosis will be found at the end of the report.

#### DEATH-RATES IN WARDS.

For the last few years the death-rate in different Wards have been given in my reports, but as they are calculated on the assumption that the population ratio has remained the same as at the census in 1921, increasing uncertainty in the rates must result from the movements of population which we know are taking place at present.

Death-rates in Wards per 1,000 living.

		1923.	1924.	1925.	1926.		Rooms per person 1921.
St. John's	...	13·5	14·15	16·71	12·7	...	1·19
St. Mary's	...	13·4	15·43	15·44	13·8	...	1·18
St. Oswald's	...	12·7	13·70	14·33	11·6	...	·98
Boughton	...	12·4	13·20	12·18	13·5	...	·99
Trinity	...	12·9	13·16	11·74	13·0	...	1·19
Chester	...	13·1	13·76	13·5	13·0	...	1·08

St. Mary's and Boughton Wards have both rates above that for Chester as a whole. While Boughton has generally been below the average, St. Mary's has always been above it; and St. John's, which is generally high, is about average. It would be unsafe to base any arguments on those figures, the circumstances are too various and uncertain owing to uncertainty as to the population.

## General Provision of Health Services for the City.

A.—The Hospitals provided by the Local Authority are (1) Fever, (2) Smallpox.

(1) The Fever Hospital, in Sealand Road, about a mile and a half from the centre of the City, has accommodation for 64 patients suffering from infectious diseases and 26 for tuberculous diseases. The Local Authority is under agreement to take a certain number of fever patients from neighbouring rural districts, and with the County to take 6 tuberculous patients. The Hospital is equipped with a power-driven laundry, a disinfecting plant, mortuary, and two ambulances. The home for nurses, which has been too small for some years back, is to be extended by the addition of 10 bedrooms and new nurses' dining room. Sanction for this extension has been given, and plans and estimates obtained. The accommodation is sufficient.

(2) The Smallpox Hospital, situated about half a mile from the Fever Hospital, to which it is connected by telephone, has 10 beds in two wards, together with nurses' accommodation, and kitchen and service room. It is kept ready for immediate use, and nurses revaccinated and ready for duty at any time.

B.—The Local Authority, in addition to the provision of 20 beds at Sealand for cases of tuberculosis, has 8 beds in the Cheshire Joint Sanatorium at Market Drayton; two extra beds having been provided during the year.

We also send patients with non-pulmonary tuberculosis to Shropshire Orthopædic Hospital. There is no agreement with this Hospital, but they take such cases as we have suitable for their Institution.

2. The Maternity Hospital is under the management of the Chester Benevolent Institution. It is conveniently situated near the centre of the town. There are eight beds provided, and they are made full use of. The Local Authority have an agreement with the Committee to pay £4 10s. 0d. per week for each of two beds for necessitous mothers. This arrangement has been of great value to a number of mothers in poor circumstances and crowded homes. During the year, 144 patients were admitted, including 8 patients to the City beds. Two of the eight patients had cæsarean section done, and one case had heart disease. There were no maternal deaths.

(3) There is no Children's Hospital in Chester, but there is a well-equipped commodious Children's Ward in the Royal Infirmary.

*Other Hospitals.*—(1) The Chester Royal Infirmary has 206 beds available for use. During the year the average number of patients resident daily was 161·66. The number of patients under treatment during the year was 2,772, of whom 796 belonged to Chester, and 1,976 to outside districts.\*

(2) St. James' Hospital, under the management of the Chester Poor Law Authority, has 150 beds, and the House 116. There were 24 patients treated in the Maternity Wards during the year.

There is no institutional provision for unmarried mothers, except that they are eligible for the use of the beds in the Maternity Hospital, which are under the control of the Local Authority.

No special provision is made for illegitimate infants.

*Ambulance Facilities.*—There are two ambulances kept at the Infectious Diseases Hospital for use of cases of infectious disease. Other two ambulances, provided by the Local Authority for use in cases of accident or non-infectious illness, are kept at the Fire Station, which is centrally situated and open day and night, so that the ambulances are always available.

#### CLINICS AND TREATMENT CENTRES.

	Accommodation.	Provided by
1. Maternity and Child Welfare, Princess Street : Consultation	Waiting Hall, Weighing Room, Consulting Room.	Local Authority.
2. School Clinics, Princess Street : Consultation and Treatment	Waiting Hall, Consulting Room,	Education Authority.
3. Tuberculosis Dispensary, St. John Street	Waiting Room, Consulting Room	Local Authority.
4. Treatment Centre Venereal Diseases, Royal Infirmary : Consultation and Treatment	Consulting Room Treatment Room	Joint, Chester and Flint and Denbigh Counties.
5. Orthopædic After - Care Clinic, St. John Street	Waiting Room, Treatment and Consulting Room	Cheshire Orthopædic After-Care Committee (premises by Chester Local Authority.

\* The local Education Authority pay to the Infirmary £125 per annum for the surgical treatment of enlarged tonsils and adenoids and for refractions and minor operations amongst school children.



The Maternity and Child Welfare Clinic meets twice a week—Mondays and Thursdays—and during some of the winter months a third meeting is held for sewing or cookery. Short talks are also given by the Health Visitors on various matters connected with health and the treatment of children.

The number of attendances and weighings are given in the following table:—

	Number.	Attendances.
Mothers ...	377	2,153
Expectant mothers ...	66	250
Babies ...	249	1,131
Children (1-5 years)	282	1,615

*Weighings.*

Babies	...	656
Children	...	323

The insistence of weighing regularly all babies and infants attending has had less effect on the attendances than was anticipated, but there is a marked change in the type of mother who attends with her children. The poorer mothers have dropped out and more prosperous families are taking their place.

During the year the following work has been done at the Clinic by the doctor attending:—

First visits of infants (under 12 months) ...	190
Subsequent visits .....	221
Children 1-5—first visits .....	70
Subsequent visits .....	50
Expectant mothers—first visits .....	78
Subsequent visits .....	44
Total consultations by doctor .....	653

The Health Visitors visit, on or about the tenth day, all children whose births are notified, except those notified as not requiring a visit. During the year there were 954 births notified, and of these 871 were regularly visited.

In the general supervision of child life, enquiring into the probable cause of still-births or the cause of infant deaths, and the health of mothers, the Nurses made the following visits:—



## HEALTH VISITORS' REPORT.

Total number of births notified (of those, 48 were notified late, 12 by doctors, and 36 by midwives) .....	954
Cases attended and delivered by doctors ...	83
Cases attended and delivered by midwives ...	871
Number of still-births (midwives' cases 30, doctors' 5) .....	35
Primary birth visits .....	871
Return visits .....	2,289
Visits to children between 1-5 years .....	3,668
Visits to expectant mothers .....	268
Other visits (infectious disease).....	2,978
Visits to midwives .....	43

Of the 871 births attended by Midwives, 80 cases required the calling in of medical help for the following reasons:—

Feebleness of child .....	15
Prolonged labour or unusual presentation ...	4
Complications before labour .....	1
Complications during labour .....	10
Complications after labour .....	16
Rise of temperature .....	6
Discharge from eyes .....	8
Deformity of infant .....	4
Lacerated perinæum .....	18
Abortion .....	2
Skin affections (child) .....	1
Prematurity .....	2
	<hr/>
	80
	<hr/>

There were 35 still-births registered during the year, and all those attended by midwives were enquired into. In those the probable cause of still-birth was as follows:—

Disease or ill health of mother .....	6
Accident of parturition .....	3
Accident to mother .....	2
Overwork .....	2
Prematurity .....	5
Difficult labour .....	3
No satisfactory reason .....	9

Under the provisions of the Midwives Act, the Local Authority paid the whole or part of the doctor's fee when called in by a midwife in 10 cases. In addition to those the fees in certain cases were paid by the Benevolent Institution where their nurses were in attendance.

The notification of artificial feeding is very badly carried out. Only 11 such notifications were received during the year.

Ophthalmia neonatorum was notified on 8 occasions.

Under the Milk (Mothers and Children) Order, 1918, milk was supplied free to 1,278 cases; 41 less than the previous year. Nearly all those receiving milk are unemployed. The statements made on application are verified where there is reason to doubt, but there has been no occasion of wilful misstatement. It is still necessary to give extra milk to persons who are in receipt of Poor Law relief.

The scheme for the supply of dentures to expectant or nursing necessitous mothers has not been taken advantage of. The large amount of unemployment is doubtless one cause, but fear of the dentist still plays a part.

The Notification of Births Act was not so well carried out as last year, there being 48 late notifications—an increase of 10.

There is now no Day Nursery in Chester.

The School Clinics comprise both consultation and treatment meetings. A clinic for consultation meets every week-day morning except Saturday, and a meeting for the treatment of minor ailments is held in the afternoons at 4 o'clock, except on Mondays and Thursdays.

There is also a Dental Clinic held daily, except when the dentist is engaged in the examination of scholars.

Tuberculosis Dispensary.—There are three meetings per week at the Tuberculosis Dispensary, on Monday and Thursday mornings and on Thursday evenings. Two hundred and three cases were on the register during the year, and 365 attendances were made. There is still some difficulty in persuading contacts to come for examination. The Health Visitors made 489 visits to the homes of tuberculous patients, and the tuberculosis officer visits the homes as occasion requires.

*Statement of Work done.*

The following is a statement of the work done at the Dispensary during the year:—

Patients attending .....	166
Attendances .....	365
New cases .....	62
Contacts examined .....	40

The treatment centre for venereal diseases is held at the Royal Infirmary. The scheme is a joint one with the Counties of Denbigh and Flint. Cheshire sends patients for which it pays its proportion, but is not a partner to the scheme. The clinic is open on the following days and hours: Mondays and Wednesdays, 5 to 7 p.m.; Thursdays, 1 to 3 p.m.; and Saturdays, 12 noon to 2 p.m. The clinic is open all day for irrigations, and trained assistants are in attendance.

The number of cases belonging to Chester, who were treated for the first time during the year, were as follows:—

	1926	1925	1924	1923	1922	1921
Syphilis .....	31	21	32	32	23	21
Gonorrhœa .....	45	43	25	30	27	26
Conditions other than venereal	12	11	9	4	3	10
Attendances .....	1443					
In-patient days .....	142	38	187	55	381	367

The number of new cases of syphilis does not show a fall, and the cases of gonorrhœa are increasing. The general impression, however, is that the venereal diseases are less prevalent, but that a greater proportion are presenting themselves for treatment.

5. The Orthopædic After-Care Clinic meets once a week, when cases are examined by a trained Sister from Shropshire Orthopædic Hospital; and a surgeon from the same Hospital reviews all cases once a month. The work of after-care is carried out under the above direction by voluntary workers of the Red Cross Society and the Society of St. John of Jerusalem.

**Public Health Officers of the Local Authority.***Whole-time. Male Staff.*

1. Medical Officer of Health, School Medical Officer, Tuberculosis Officer and Medical Superintendent Infectious Diseases Hospital.

2. Assistant Medical Officer and Assistant School Medical Officer, etc.
- 3.†Chief Sanitary Inspector. F.S.I.A., C.R.S.I., Tech. Silver Medallist.
4. Chief Clerk.
- 5.\*†District Sanitary Inspector, M.S.I.A., C.R.S.I.
6. District Sanitary Inspector, C.R.S.I.
7. Assistant District Inspector.
8. §Assistant Clerk and Additional Inspector, C.R.S.I.
9. Assistant Clerk and Laboratory Attendant.
10. Labourer.
11. Rat Catcher.

*Female Staff.*

- Health Visitor and School Nurse, C.M., C.R.S.I.
- Health Visitor and School Nurse, C.M., C.R.S.I., General Trained.
- Health Visitor and School Nurse, C.M., General Trained.
- Health Visitor and School Nurse, C.M., General Trained.

*Part-time Staff.*

Two Clinical Officers, V.D. Clinic, on the Staff of the Royal Infirmary.

Physician: at Maternity and Child Welfare Centre.

Veterinary Surgeon: under Tuberculosis (Animals) Order, 1925.

\* Chiefly employed in Meat Inspection and Housing.

† Certificate of the Royal Sanitary Institute for Meat and Food Inspectors.

§ Certificate Liverpool University for Meat and Food Inspectors.

## PROFESSIONAL NURSING IN THE HOME.

(a) General Nursing.—There is no outside nursing done by the Infirmary Authorities. Most of the nursing for general purposes is done by the Chester District Nursing Association. The nurses employed by the Chester Benevolent Institution attend roughly a third of the maternity cases in their homes.

(b) As regards infectious diseases, the great majority of these cases are treated in hospital. In the case of measles and whooping cough, the Local Authority have entered into an agreement with the Chester Benevolent Institution by which, for the payment of £50 a year, they help in the home-treatment of minor ailments, and, at times of epidemic, attend in their homes cases of measles and whooping cough sent to them by the Local Authority. Provision is now made for treatment of severe or complicated cases of these diseases in hospital.



Midwives.—There are 31 midwives practising in the City, all certified and none subsidised by the Local Authority.

Nine of the midwives practice under the Benevolent Institution and Maternity Home. All midwives are seen, together with their registers and bags, once a year by the Medical Officer, who also interviews them in connection with their work as occasion requires. One midwife was reprimanded during the year.

### Chemical and other Laboratory Work.

In the Municipal Laboratory are examined all the necessary swabs and specimens from the Isolation Hospital and from the Tuberculosis Clinic, and also a large amount of material sent by private practitioners in the City. In addition, the City water supply is examined chemically once every month, and water from each separate filter and from a consumer's tap is examined bacteriologically every 14 days. There is also a large number of samples of milk examined bacteriologically. The following table sets out the work done in the Laboratory:—

#### LABORATORY WORK, 1926.

Material.	Examined for	Positive.	Negative.	TOTAL.
Throat Swab ...	Diphtheria bac. ...	59	342	401
Sputum ...	Tubercle bac. ...	72	122	194
Urine ...	Albumen ...	1	2	3
Eye Swab ...	Gonococcus ...	...	7	7
Smear ...	Gonococcus ...	...	1	1
Fæces ...	Bac. Typhosus ...	...	16	16
Blood ...	Widal B. Typhosus ...	2	1	3
" ...	" Parat Typhosus B. ...	2	...	2
Fluid ...	Meningococcus ...	...	2	2
Hair ...	Ringworm ...	4	2	6
Totals ...		140	495	635
Chemical Examinations of City Water Supply ...				12
Bacteriological Examinations of City Water Supply from				
separate Filters ...				185
Bacteriological Examinations of Milk ...				162
				— 359
Total Examinations ...				994



## LIST OF ADOPTIVE ACTS, BYE-LAWS AND LOCAL REGULATIONS IN FORCE IN THE DISTRICT.

- Public Health Acts Amendment Act, 1890.
- Infectious Diseases (Prevention) Act, 1890.
- Public Health (Prevention and Treatment of Diseases) Act, 1913.
- Public Health (Tuberculosis) Act, 1921.
- Public Health Act, 1925, except Sections 17, 18, 19, 20, 34 and 56.
- Rats and Mice (Destruction) Act, 1919.
- Baths and Wash Houses Act, 1907.
- Private Street Works Act, 1892.
- Public Improvements Act, 1860.
- Chester Improvement Acts, 1845, 1884.
- Bye-laws as to Obstructions, Encroachments and Nuisances, 1879.
- Bye-laws under the Dairies, Cowsheds, and Milkshops Order, 1885, 1904.
- Bye-laws for the Regulation of Slaughter-houses, 1909.
- Bye-laws for the Regulation of Slaughter-houses provided by the Council, 1925.
- Bye-laws for the Regulation of Common Lodging-houses, 1909.
- Houses and Parts of Houses Let in Lodgings Regulations, 1867.
- Bye-laws in respect of Nuisances, 1887.
- City of Chester (Measles and Whooping Cough) Regulations, 1925—S.R.O., 1925, No. 1130.
- City of Chester (Public Health, etc.) Order, 1926 (adopting Public Health Acts Amendment Act, 1907, and repealing certain Sections in Acts of 1845 and 1884.

### Sanitary Circumstances of the Area.

*Water.*—The City's water supply is taken from the River Dee, within the City boundary, about one and a half miles above the weir. The Dee Valley is well populated, and there are besides fair-sized towns, numerous smaller villages and private houses draining into the river, many, so far as I have been able to learn, having no system of sewage purification. Chester has no control over these sources of pollution, and the Authorities at fault do nothing. A

few years ago an attempt was made by an outside Authority to take the water from one of the largest and purest tributaries of the Dee, and it is understood there is now a similar proposal on a larger scale in consideration. Chester, so far, has taken no steps either to prevent this or to ensure an adequate and satisfactory supply for itself.

The chemical examination of the water has shown nothing unusual during the year. There is the usual evidence that the river is not a pure source of supply, which is merely confirmation of what can be seen in any part of its course. The figures of analysis have not varied much from the usual state. What variations as have occurred are due to floods.

#### CHEMICAL ANALYSIS OF CITY WATER SUPPLY, 1926.

Date 19'6.	SOURCE.	Chlorine.	Free Ammonia	Albuminoid Ammonia.	Oxygen absorbed in 4 hour.	Oxygen absorbed in 4 hours.
Jan. 13	Cathcart Square, Crook St. ...	1'9	'004	'021	'034	'130
Feb. 10	Jonas Court, Princess St. ...	1'8	'006	'030	'161	'243
Mar. 17	Parry's Court, Princess St. ...	1'8	'0018	'015	'045	'12
April 14	Kiln Court, Linenhall St. ...	3'0	'002	'015	'046	'088
May 19	Holloway's Court, Crook St. ...	1'4	'0008	'0141	'064	'172
June 16	Parker's Court, Princess St. ...	1'6	'002	'012	'056	'152
July 28	Greenock Place, Crook St. ...	1'4	'002	'014	'112	'216
Aug. 11	Jones' Court, Princess St. ...	2'2	'0018	'019	'056	'130
Sept. 15	Trinity Court, Trinity St. ...	1'8	'0032	'019	'176	'307
Oct. 13	Valentine's Ct., Northgate St....	1'8	'002	'022	'185	'354
Nov. 10	Kiln Yard, Linenhall St ...	1'3	'002	'022	'152	'292
Dec. 8	Banners Court, Princess St. ...	1'8	'0186	'026	'132	'222

*Bacteriological Examination.*—From the bacteriological standpoint, the water has not been satisfactory. This is the third year in which the higher standard of absence of typical bacillus coli from 100 c.c. of water has been applied, and it is the most disappointing. The percentage of samples from the clear water reservoir which passed the 100 c.c. test was only 29'1; in 1925 it was 63'6 per cent., and in 1924 41'0 per cent. On the basis of the old 10 c.c. test the three years' percentages are—1926, 83'3 per cent.; 1925, 86'3 per cent.; and 1924, 66'0 per cent.

For purposes of comparison, I give the average percentage successes (absence of typical *bacillus coli*) for all London waters for the years 1925, 1926: for the 100 c.c. test 83·5 per cent. and 10 c.c. test 97·3 per cent.—(Twentieth Annual Report, Metropolitan Water Board, page 97.) The Chester Waterworks Company have not succeeded in supplying a satisfactory water supply during the year.

The following table gives details of the bacteriological examinations done during the year:—

The following table sets out the bacteriological findings for the year:—

### Bacteriological Examination

Date.	Unfiltered River Water.			Filter 1.			Filter 3.			Filter 4.		
	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)
1926												
			5 1			10 100			10 100			10 100
Jan. 6	2400	935	x x	Not Running			20	5	— —	Not Running		
Jan. 20	800	1245	x x	Not Running			8	5	— x	4	3	— x
Feb. 3	550	2225	x x	Not Running			2	5	— —	4	3	— —
Feb. 17	800	670	x x	Not Running			2	6	— x	Not Running		
Mar. 17	400	125	x x	Not Running			7	14	— x	8	18	— x
Mar. 24	200	220	x x	Not Running			4	3	— —	Not Running		
April 7	300	70	x —	Not Running			3	2	— —	Not Running		
April 21	300	100	x —	4	7	— —	7	4	— —	Not Running		
May 12	250	50	x x	4	G.O.	— —	3	14	— —	Not Running		
May 26	250	60	x —	Not Running			6	3	— —	18	2	x x
June 9	5100	550	x x	Not Running			Liq.	11	— x	Liq.	16	— x
June 30	350	55	— —	Liq.	5	— —	Liq.	2	— —	6	4	— —
July 14	Liq.	20	— —	Liq.	1	— —	Liq.	5	— —	Liq.	3	— —
July 28	22500	100	x x	18	G.O.	— x	45	G.O.	— —	Not Running		
Aug. 4	700	130	x x	Not Running			10	G.O.	— x	Not Running		
Aug. 25	1450	525	x x	7	2	— x	12	8	— —	Not Running		
Sept. 1	1900	290	x x	12	7	— —	4	11	— x	Not Running		
Sept. 22	4400	230	x x	70	9	— x	6	3	— x	Not Running		
Oct. 6	2200	110	x x	Not Running			40	15	x x	5	G.O.	— x
Oct. 27	700	840	x —	Nil	2	— x	112	2	x x	Not Running		
Nov. 3	12200	2495	x x	6	3	x x	45	3	— x	Not Running		
Nov. 17	1550	480	x x	80	8	— x	52	15	— x	32	7	— x
Dec. 1	1300	100	x —	24	5	— —	27	5	— —	Not Running		
Dec. 15	150	35	x x	6	5	— x	7	2	x x	Not Running		

REFERENCE :—G.O. Agar Grown over. x Bacillus Coli Present.

## of City Water Supply, 1926.

Filter 5.			Filter 6.			Filter 7.			Filter 8.			Consumers' Tap.		
B.			B.			B.			B.			B.		
Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli	Gel. Agar. Coli
(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)
10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100	10 100
35 9 — x	22 6 — x	15 6 — x	42 18 — x	250 18 x x										
15 4 — x	7 6 — x	4 1 — —	8 3 — x	14 5 x x										
14 4 — —	5 3 — —	10 G.O. x x	17 17 — —	10 6 — —										
11 G.O. — x	6 3 — x	6 Nil — x	9 5 — x	9 G.O. — x										
13 9 — x	4 8 — x	4 8 — x	7 8 — x	10 5 — x										
4 2 — x	1 4 — x	2 4 — x	2 9 — —	5 24 — —										
3 2 — —	6 2 — —	3 2 — —	4 1 — —	6 15 — —										
16 6 — —	7 7 — —	4 12 — —	20 6 — —	20 18 — x										
20 G.O. — —	2 2 — x	7 8 — —	14 6 — x	7 G.O. — x										
Liq. 5 — —	Liq. 2 — —	7 25 — —	Liq. 4 — x	Liq. G.O. — x										
Liq. 10 — —	Liq. 5 — —	Liq. 65 — —	Liq. G.O. — x	28 15 — —										
Liq. 2 — —	Liq. 5 — —	Liq. 8 — —	Liq. 2 — —	Liq. 2 — —										
Liq. 1 — —	Liq. 4 — —	Liq. 2 — —	Liq. 7 — —	Liq. 6 — —										
Liq. 14 — x	24 G.O. — x	Not Running	19 G.O. x x	8 G.O. x x										
16 G.O. — x	8 G.O. — —	Not Running	12 G.O. — x	26 G.O. — x										
52 12 — x	Liq. 2 — x	Not Running	Liq. 5 — —	24 12 — —										
46 8 — —	15 G.O. — —	Not Running	15 5 — x	75 66 x x										
37 9 — x	25 5 — x	Not Running	14 12 — x	25 5 x x										
340 310 — x	104 96 x x	60 10 x x	37 10 — x	105 8 — x										
12 2 — x	8 3 x x	9 2 x x	25 3 x x	42 20 — x										
40 11 x x	7 3 — x	45 24 x x	21 12 x x	110 14 x x										
22 9 x x	10 10 — x	40 12 x x	37 9 — x	16 12 x x										
20 12 x x	20 4 — x	26 8 — x	30 8 — x	25 6 — x										
8 2 — x	4 2 — x	12 8 — x	4 2 x x	10 5 — x										

Liq.—Gelatine Liquefied. — Bacillus Coli Absent.



*Closet Accommodation.*—Since 1920 there have been in the City no privies or pail closets which can be abolished. There are now only 9 privies situated in the rural parts of the town, and 41 pail closets in houses built too low to allow access to a sewer.

*Scavenging.*—Our system of household removal has been greatly improved during the year by the introduction of the container system. The house refuse is collected into horse-drawn wagons with low loading line, and provided with suitable covers so that only that section of the wagon which is being loaded is open at any one time. When full, the loaded container is put on a motor wagon and taken to the tip, the wagon at the same time leaving an empty container for the continuous collection of refuse.

There are still a few of the old unsatisfactory open carts in use, and it is hoped that they will be soon dispensed with. One essential of a satisfactory system of household refuse removal is the provision of a suitable moveable dust bin, and a further step towards their universal use has been taken during the year, when 152 ashpits and 794 ash bins were introduced.

### **The Sanitary Inspection of the Area.**

The following is a tabular statement of the work done in the sanitary department:—

Complaints in respect of nuisances .....	242
Visits in respect of nuisances .....	3548
Rooms disinfected after infectious disease ...	262
Investigations <i>re</i> infectious disease .....	1171
Matters referred to City Surveyor .....	54
Tests applied to drains .....	311
Drains found defective .....	411
Drains repaired .....	313
Drains reconstructed .....	98
Ashpits abolished .....	152
Ashbins provided .....	794
Inspections of courts .....	235
Inspections of school premises .....	22
Inspections of stables, etc. ....	95
Inspections of canal boats .....	149
Inspections of factories and workshops ...	252
Dairies, cowsheds and milkshops .....	91
Inspections of slaughter-houses .....	1444

Inspections of butchers' shops .....	250
Inspections of fishmongers' shops .....	220
Inspections of other food shops .....	342
Inspections of offensive trade premises .....	28
Smoke observations .....	16
House-to-house (district inspections) .....	168
Visits to common lodging houses .....	19
Dwellings (inspections and re-inspections)...	5766

The following notices were served:—

Intimation .....	1150
Statutory .....	140

Of the statutory notices, 10 were served under the Housing Act, 1925, and 4 under the Rats and Mice (Destruction) Act.

### RAT WEEK, 1926.

During the week ended 8th November, we continued our usual intensive destruction of rats throughout the City. Particular attention was paid to the sewers and those districts in which rats are known to be most prevalent.

We used 40 lbs. of "Dalroc" and 10 lbs. of Red (Squills) bait, comprising 3,200 baits, and 52 lbs. of Barium, comprising approximately 35,000 baits. Revisits where baits had been laid showed the poison, in the majority of cases, had been freely taken, and those places have since been again treated. In one of the sewer catch-pits numerous dead rats were found, and during the construction of some drains in Newtown litters of dead rats were found in their nests.

Notices were placed in the Press inviting the public to co-operate, and traps were loaned and poison given free to any responsible person making application to the Health Department. The Railway Companies were also requested to co-operate by systematic treatment of their buildings, and poison was again supplied to one of the Railway Companies. The public made 31 applications for poison, and 8 for traps. The poison used was harmless to humans and domestic animals.

### Premises and Occupations which can be controlled by Bye-laws.

#### REGISTRATION OF WHOLESALE DEALERS IN MARGARINE AND MARGARINE CHEESE.

The number of dealers in margarine on the register remains the same—15. The premises are regularly inspected and kept in a satisfactory condition.

### FRIED FISH SHOPS.

There are 35 premises occupied and used for the cooking of fish and chipped potatoes for sale. The premises are frequently visited, and the ranges and utensils and materials carefully examined. Special attention is paid to the ventilation of the cooking ranges, but it seems impossible to prevent a certain amount of smell escaping.

### RAG AND FLOCK ACT.

Two samples of rag flock submitted for analysis contained three parts per 100,000 of chlorine, which is well below the prescribed standard.

### COMMON LODGING HOUSES.

There has been no change in the number of common lodging houses. There are four registered premises containing a total of 27 rooms which provide for 145 men. There is no common lodging house for women. The premises were kept throughout the year in a reasonably good condition.

### CANAL BOATS ACTS, 1884 AND 1887.

The number of canal boats on the Registers kept under the above Acts was 291 on 31st December. This is 16 fewer than in 1925.

One hundred and forty-nine boats were inspected, and, with eight exceptions, complied with the regulations. The contraventions were the absence of a Certificate of Registration in three cases, three dilapidated and two without proper water vessels.

The accommodation provided in the boats inspected was for 508 persons, but only 429 were in occupation. This number included 166 adult males, 127 adult females, 89 children of school age, and 47 children under school age. Particulars of the work done will be found tabulated at the end of the Report.

### SANITARY CONDITION OF SCHOOLS.

The sanitary condition of schools has been maintained in a satisfactory manner.

### HOME WORKERS.

The homes of outworkers were regularly inspected, and were found satisfactory.

Thirty-six lists of such workers were received, giving particulars of 22 persons employed.

## SMOKE ABATEMENT.

Numerous observations have been made, and a warning sent where necessary. No other action was taken during the year.

## PUBLIC CONVENIENCES.

Some of the public conveniences are badly placed and are of old construction, which makes cleanliness almost impossible, so that at times they are a nuisance. Some of the worst could be taken to be superfluous and done away with.

### Housing.

During 1926 there has been successful progress made in the provision of houses. Information supplied by the Rating and Valuation Officer states that 238 houses have been built in the City during the year, and as the Corporation have built 102 at Boughton Heath, outside our boundary, we have the substantial increase of 340 houses available for our population. Unfortunately, we lose as population the inhabitants of the 151 houses now occupied at Boughton Heath roughly 700 persons. The net increase for the year in the number of houses within the City is 232, as 6 houses were demolished. There is still very serious overcrowding, which will require some years to overcome, even at the present rate of progress.

The average number of persons per house during the year was 4.7. In 1911 it was 4.83: evidence of improvement.

During the year, 168 houses were inspected under the Inspection of District Regulations, and records made. Of this number, 13, being in reasonably good repair, did not call for action. Of the 155 remaining, 62 were rendered fit for habitation through informal action, and 10 dealt with under section 3 of the Housing Act, 1925. The repairs in one house were carried out by the Local Authority. Tenders were invited on specifications drawn up by the Health Department, the work being supervised by the Housing Inspector.

The total number of houses inspected for defects under the Public Health Acts or Inspection of District Regulations was 1,706. At the end of the year, 78 houses were receiving attention. Of these, work had been agreed upon and arranged for in 13, and 65 were under consideration of the owners. At the end of 1925, 61 houses were outstanding, and these have been satisfactorily



dealt with. As result of informal negotiation, 13 houses are to be demolished. At the year-end, 10 of these houses had been vacated, but the remaining 3 will require to be dealt with under statutory notices.

Under the Public Health Acts, 1,538 houses have been inspected, of which 270 gave no cause for complaint. Intimation notices were served in 591 instances and statutory notices in 130. Informal action resulted in satisfactory restoration to good condition in 547 cases. Of the statutory notices served there were none outstanding at the end of the year.

The following tabular statement sets out the housing work done under different Acts or Orders:—

There is need for bye-laws regulating the use of houses let in lodgings, and for the use of vans and sheds as habitations.

## HOUSING CONDITIONS.

*STATISTICS.—Year ended 31st December, 1926.*

### 1. General.

(1) Estimated population .....	41,913
(2) General death-rate .....	13'0
(3) Death-rate from tuberculosis .....	1'02
(4) Infantile mortality .....	
(5) Number of dwelling-houses of all classes (1926)	8,910
(6) Number of working-class dwelling-houses .....	6,428
(7) Number of new working-class houses erected .....	145

### I.—*Inspection.*

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) .....	1,706
(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	168
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .....	51
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation .....	1,372



## II.—*Remedy of Defects without Service of Formal Notices.*

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers .....	1,232
---	-------

## III.—*Action under Statutory Powers.*

### A. Proceedings under Section 3 of the Housing Act, 1925:—

(1) Number of dwelling-houses in respect of which notices were served requiring repairs .....	10
(2) Number of dwelling-houses which were rendered fit—	
(a) by owners .....	10
(b) by Local Authority in default of owners .....	1
(3) Number of dwelling-houses in re- spect of which Closing Orders became operative in pursuance of declaration by owners of in- tention to close .....	0

### B. Proceedings under Public Health Acts:—

(1) Number of dwelling-houses in respect of which notices were served re- quiring defects to be remedied .....	130
(2) Number of dwelling-houses in which defects were remedied—	
(a) by owners .....	130
(b) by Local Authority in default of owners .....	0

### C. Proceedings under Sections 17 and 18 of the Housing, Town Planning, etc., Act, 1909:—

(1) Number of representations made with a view to the making of Closing Orders .....	0
(2) Number of dwelling-houses in re- spect of which Closing Orders were made .....	0

(3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit	0
(4) Number of dwelling-houses in respect of which demolition Orders were made .....	0
(5) Number of dwelling-houses demolished in pursuance of demolition Orders .....	0

### Inspection and Supervision of Food.

All farms and dairies within our area are regularly inspected and kept in as clean a condition as circumstances would allow. The Milk and Dairies Order, 1926, will enable considerable improvement to be made in the way of light and ventilation and cleanliness of floors.

Besides those regular inspections for cleanliness and examinations by the City Veterinary Officer twice yearly, under the Tuberculosis Order (Animals), 1925 the richness and cleanliness of the milk has been further checked by the chemical examination of 54 samples and the bacteriological examination of 162 for cleanliness and 35 samples for the presence of tubercle bacillus.

### Milk Designations Order.

The quality of the milk supply has been satisfactory, the average fat content of the 54 samples being 3.67 per cent., and of non-fatty solids 8.76. Both figures slightly lower than last year.

As to cleanliness the examination of the 162 samples shows that 64 per cent. are clean, and if we take as satisfactory the limit laid down by the Milk (Special Designations) Order, 1923, of 200,000 germs per c.c., 74.6 per cent. of the samples were satisfactory, leaving 25.4 per cent. as dirty. Last year the percentage of satisfactory milk was 79.6, and 20.4 not clean. Fifty-four per cent. of the samples contained bacillus coli in 0.1 per cubic centimeter. It is in these two middle quarters of the year that we get most of the dirty milks, 75 per cent. between April and September. Many milk producers do not cool the milk saying that their customers doubt the freshness of cooled milk. More general adoption of cooling would be advantageous to all.

In every case where a sample of milk is found to contain 200,000 germs per cubic centimeter the retailer and producer are written to and it is suggested to the producer that the Cheshire School of Agriculture would be pleased to help him in any difficulty. The Principal of the school has been kind enough to allow this, and it has been taken advantage of in a number of cases during the year. One of the milk producers in Chester has now obtained a licence to produce Grade A milk and Grade A (tuberculin tested), and Pasteurised milk are now on sale in Chester. So as to inform the public as to the nature of the various grades of milk a leaflet describing them was widely circulated during the year.

The samples of milk examined for the presence of tubercle bacillus did not show its presence, but unsatisfactory conditions were detected in a number of cases, and where necessary the milk implicated was put out of circulation.

During the year a retailer of milk was reported to Committee as supplying consistently dirty milk. After an interview and consideration of the circumstances it was resolved to reconsider the matter in 6 months time.

The following tables give details of the bacteriological and chemical examination of milk during the year.

Germs in 1 c c.			1926.	
			Number.	%
Under 100,000 per c.c.	...	...	104	64.19
100,000 & under 200,000	...	...	17	10.49
200,000 & under 500,000	...	..	20	12.34
500,000 & under 1,000,000	...	...	7	4.32
1,000,000 and over...	...	...	14	8.64
Total examined	...	...	162	

## CHEMICAL EXAMINATION OF MILK.

Date.	Sample No.	Fat.	Solids not Fat.	Date.	Sample No.	Fat.	Solids not Fat.
Jany. 24	2	3'03	9'29	April 8	46	3'26	9'3
	3	3'7	9'29		47	3'35	9'05
	4	3'85	9'21	May 28	56	3'88	8'88
	5	3'87	9'31		57	3'75	8'67
	6	3'13	8'95		58	3'93	8'87
	7	2'95	8'58		59	3'6	8'86
	8	3'88	9'08		60	3'34	8'86
	9	3'38	8'92		61	3'83	9'15
	10	3'19	8'07	Sep. 17	76	4'2	9'44
	11	3'65	9'01		77	4'38	8'78
	12	3'59	8'73		78	4'02	9'14
	13	3'6	9'12		79	4'17	9'23
" 27	15	3'6	8'63		80	4'41	8'85
	16	3'22	8'58		81	4'08	9'06
	17	3'2	8'70		82	3'85	8'70
Feb. 2	24	3'96	7'79	Oct. 18	93	4'78	8'90
	25	2'78	7'73		94	4'89	9'15
	26	3'15	8'65	Nov. 9	109	3'7	9'34
" 10	327	3'7	8'9		110	2'42	9'32
" 12	27	2'97	9'49		111	4'32	8'9
Mar. 9	28	4'49	9'26		112	4'0	9'1
" 9	29	3'78	8'79		113	3'65	9'03
April 8	41	3'0	9'24		114	3'79	9'07
	42	3'4	8'94	Nov. 11	115	2'44	9'13
	43	3'95	8'93	" 17	118	4'09	9'1
	44	3'98	8'92	Dec. 17	119	4'52	9'18
	45	3'52	8'84		120	4'52	9'19

The average composition of the fifty-four samples, as regards fat and non-fatty solids, is respectively 3'69 per cent. fat and 8'76 per cent. Solids not Fat. These are slightly below the average for 1925, when averages were—Fat 3'7 per cent. and Solids not Fat 8'92.

### Private Slaughter-houses and Queen Street Public Abattoir.

During the year the Abattoir has been extended and there is now a central slaughter hall for cattle and calves and the covered portion of the adjoining yard is reserved for pig slaughtering and dressing.

The extension is reserved for sheep and provides for lairage accommodation, slaughter hall and cooling hall. All animals are stunned previous to slaughter with the Temple Patent Killer. This instrument has a captive bolt, therefore it is perfectly safe to use. On the whole, the instrument works quite satisfactorily, but the butchers are not so careful in handling it as they might be. Each gun barrel is examined by the maker once a month, and on several occasions he has made comment in respect of the abuse to which the guns have been submitted. It was found necessary to take proceedings against two slaughter-men for slaughtering sheep which

had not been previously stunned with a mechanical instrument. In their defence it was stated the mechanical killers were not effective. The case against them was dismissed, but there is no doubt a better understanding now exists as a result of the proceedings, and we are satisfied the slaughter-men comply with the bye-law.

Subsequent to the proceedings, the Public Health Committee investigated the complaint of the inefficiency of the mechanical killers, and they were satisfied that, with fair and proper use, the instruments were efficient.

Meat marking is now well established in the abattoir. All butchers regularly using the abattoir, with one exception, have their meat marked. No charge is made for marking, and each of the butchers have been provided with a card to hang in his shop explaining the origin of the mark.

In the first instance the butchers objected to the marking, stating their customers thought they were being supplied with imported meat. The introduction of the explanatory cards overcame this objection. Meat marking occupies a great amount of the Inspector's time, but marking is very desirable. The prevalence of foot and mouth disease considerably affected the use of the abattoir, owing to the restrictions placed on the movement of cattle.

The number of animals slaughtered in the Public Abattoir during the year was as follows, viz. :—

Cattle .....	801
Calves .....	666
Sheep .....	8,731
Pigs .....	468
Total .....	<u>10,666</u>

The number of Private Slaughter-houses in the City remains the same as last year, *i.e.*, 5 registered and 2 licensed. It has not been found practicable to carry out meat marking in the private slaughter-houses, owing to their scattered situation.

These slaughter-houses are regularly visited, and every effort is made to inspect all carcasses before removal to the shops.

There were two instances when it was found necessary to make formal seizures of diseased meat.\*

\* In each case the animals had been slaughtered in rural districts outside the City.



The first instance was in respect of a carcase of a calf which was found to be affected with generalised tuberculosis. The circumstances of this seizure were considered by the Public Health Committee, and it was decided not to institute proceedings.

The second instance was of a more serious nature, and involved the institution of legal proceedings against a local butcher and also a pig dealer.

During routine inspection, the Chief Sanitary Inspector found in a butcher's shop two sides of diseased pork, less the head, exposed for sale.

The disease, tuberculosis, was so extensive as to be perfectly obvious to the butcher if he had taken the necessary precaution to examine it before offering it for sale to the public.

The pork was formally seized and proceedings in two cases were instituted against the butcher, and proceedings were also taken, for aiding and abetting, against the pig dealer supplying the meat.

The butcher was fined £20 and £2 12s. 6d. costs, and the pig dealer £10 and £2 12s. 6d. costs.

The remainder of the condemned food was voluntarily surrendered, and does not call for special comment.

ARTICLES CONDEMNED.				No. of Instances.	REASON FOR CONDEMNATION.
<b>BEEF</b>					
Carcases and offal...	...	...	...	30	Generalised Tuberculosis
"	"	...	...	1	Johnc's Disease
"	"	...	...	1	Febrile
Organs and portions of carcasses	...	...	...	104	Localised Tuberculosis
"	"	"	...	56	Parasitic & other conditions
<b>MUTTON AND LAMB.</b>					
Carcases and offal ...	...	...	...	3	Emaciation
"	"	...	...	9	Dropsy
"	"	...	...	6	Febrile
"	"	...	...	5	Distomatosis
"	"	...	...	1	Jaundice
Organs ...	...	...	...	122	Parasitic & other conditions
<b>PORK.</b>					
Carcases and offal ...	...	...	...	7	Generalised Tuberculosis
"	"	...	...	2	Febrile
"	"	...	...	1	Dropsy
"	"	...	...	1	Jaundice
Organs and portions of carcasses...	...	...	...	65	Localised Tuberculosis
Organs ...	...	...	...	5	Parasitic & other conditions
<b>VEAL.</b>					
Carcase and offal ...	...	...	...	1	Navel ill
"	"	...	...	1	Joint ill
"	"	...	...	1	Tuberculosis
<b>IMPORTED MEAT.</b>					
Portions of Beef carcasses.	...	...	...	2	Bone Taint
Carcases of Lamb ...	...	...	...	2	Decomposition
<b>FISH.</b>					
Boxes of Plaice ...	...	...	...	1	"
Boxes of Kippers ...	...	...	...	9	"
Tins of Salmon ...	...	...	...	1	"
<b>VEGETABLES.</b>					
Sacks of Carrots ...	...	...	...	3	"
" Sprouts ...	...	...	...	4	"
" Potatoes ...	...	...	...	34	"
<b>BREAD.</b>					
Loaves ...	...	...	...	157	"

The estimated weight of condemned food was 12 tons.

In the inspection of meat and other foods the following visits have been made:—

Slaughter-houses .....	1,444
Butchers' shops .....	250
Fishmonger's shops .....	220
Other food shops and stores .....	342
	<hr/>
	2 256

## Contagious Diseases of Animals Act.

### TUBERCULOSIS (ANIMALS) ORDER 1925.

During the year, 23 head of cattle were dealt with under this Order. In one case it was possible to salvage the carcase of beef. Sixteen cases were diagnosed by the City's Veterinary Inspector in the sale yards, and of these cases, ten were found to be affected in the udder, and 5 carcasses were affected with generalised tuberculosis, although lesions were not found to be present in the udders. Each of seven animals removed from local farms were found to be affected with generalised tuberculosis, including affection of the udders.

Twenty-two carcasses and offal were condemned, as they were found unfit for food.

Thirty-four samples of milk were tested for the presence of tubercle bacilli in the John Elliott Memorial Laboratory, Chester. Although several of the samples proved the milk to be unsatisfactory owing to the presence of pus and excess of leucocytes, tubercle bacillus was not found.

### SALE OF FOOD AND DRUGS ACT, 1875-1907.

The following table sets out the articles of food submitted to the Public Analyst for analysis under the above Acts :—

Article.	No. not Genuine.	No. Genuine.	No. taken formally.	No. taken informally.	Totals.
Milk ... ..	7	47	48	6	54
Butter ... ..	...	10	10	...	10
Cream ... ..	1	9	10	...	10
Apples ... ..	2	5	6	1	7
Jam ... ..	...	4	4	...	4
Cream of Tartar ... ..	...	3	3	...	3
Currants ... ..	...	3	3	...	3
Pork and Beans ... ..	...	3	...	3	3
Raisins ... ..	...	3	3	...	3
Baking Powder ... ..	...	2	2	...	2
Condensed Milk ... ..	...	2	2	...	2
Custard Powder ... ..	...	2	2	...	2
Flour ... ..	...	2	2	...	2
Peas (tin containers)...	2	...	1	1	2
Lard ... ..	...	2	2	...	2
Rice ... ..	...	2	2	...	2
Tomatoes (tin containers) ...	...	2	...	2	2
White Pepper ... ..	...	2	2	...	2
Coffee and Milk ... ..	...	1	...	1	1
Malt Vinegar... ..	...	1	1	...	1
Marmalade ... ..	...	1	1	...	1
Peas (in bottle) ... ..	...	1	...	1	1
Sardines ... ..	...	1	...	1	1
	12	108	104	16	120

Of the total samples analysed, 13·3 per cent. were adversely reported upon. Fifty-four samples of milk were examined, of which 7 were found to be below the standard. This number is equal to 12·9 per cent. of the milk samples analysed. Four of the samples were deficient in fat ranging from 1 per cent. to 19·3 per cent. Two samples contained extraneous water, whilst a further sample was deficient in fat to the extent of 7·3 per cent and also contained 9·1 per cent. of extraneous water.

On proceedings being instituted in respect of the latter sample the defendant was ordered to pay the costs, *i.e.*, £2 3s. 6d. The circumstances of this case were such as to call for a much heavier penalty.

One sample of cream was found to contain ·074 per cent. of boric acid, and was sold without being labelled "preserved cream." A letter of warning was sent to the vendor after careful consideration of his explanation.

Of the 7 samples of apples examined for the presence of arsenic, 2 were found to contain  $\frac{1}{330}$  grain and  $\frac{1}{250}$  grain, respectively, of arsenious oxide per pound. As the limit of arsenic in food is  $\frac{1}{100}$  grain per pound no action was taken. Two samples of peas in tin containers contained a small quantity of copper sulphate, but the amount was so small as to render unnecessary legal proceedings.

The following table gives particulars of the legal proceedings instituted under the Sale of Food and Drugs Acts:—

No. of Sample.	Name of Article.	Result of Analysis.	Result of Legal Proceedings or action taken by the Public Health Committee.
7	Milk ..	Deficient in 1·6 % of milk fat	A warning was issued to the vendor.
10	Milk ..	Contained 5·1 % extraneous water.	A warning was issued to the vendor.
19	Apples ..	Contained arsenic (as arsenious oxide) 1/330 gr. per lb.	No action taken. The prescribed limit for arsenic is 1/100 gr. per lb.
23	Apples ..	Contained arsenic (as arsenious oxide) 1/250 gr. per lb.	Ditto ditto
24	Milk ..	Contained 8·5 % extraneous water.	Proceedings instituted but withdrawn, as the vendor was also proceeded against in respect of sample No. 25, which was a part of the same consignment.
25	Milk ..	Deficient in 7·3 % of milk fat, and contained 9·1 % extraneous water.	Proceedings instituted. Defendant was ordered to pay £2 3s. 6d. costs.
27	Milk ..	Deficient in 1 % of milk fat.	A warning was issued to the vendor.
88	Cream ..	Contained 0·074 % of borie acid preservative.	A warning was issued to the vendor after the Committee had considered his written explanation.
100	Peas (in tin container) ..	Contained 1·19 grs. of crystallised sulphate of copper per lb.	This sample was purchased informally. For corresponding formal sample see No. 116.
10	Milk (pasteurised, in bottle)	Deficient in 19·3 of milk fat.	This sample was purchased informally. For corresponding formal sample see No. 115.
115	Milk (do)	Deficient in 18·7 of milk fat.	Proceedings instituted Case dismissed, but the defendant was ordered to pay £1 1s. 6d. costs.
116	Peas (in tin container)	Contained 1·05 grs. of crystallised sulphate of copper per lb.	Circumstances considered by the Public Health Committee. Resolved no proceedings be taken, as the amount of crystallised sulphate of copper was very small.

#### DAIRIES, COWSHEDS AND MILKSHOPS ORDERS.

Work done under those Orders is detailed below:—

Registered cow keepers .....	16
Inspections of cowsheds .....	46
Contraventions .....	5
Contraventions remedied .....	5
Dairies (including those attached to cowsheds) .....	47
Dairy inspections (City) .....	35
Contraventions* .....	6
Contraventions remedied .....	5
Nature of contraventions in Dairies and Cowsheds—	
Need of limewashing .....	3
Defective yard drains .....	Nil
Defective yard paving .....	2
Unsuitable premises .....	Nil

\* Proceedings were instituted against an unregistered milk seller. A fine of 10/-, including costs, was imposed.



## PUBLIC HEALTH (MILK AND CREAM) REGULATIONS.

1912—1917.

Report for the Year ended 31st December, 1926.

## 1. Milk and Cream not sold as Preserved Cream:—

	(a) No. of samples examined for the presence of a preservative.	(b) No. in which preservative was reported to be present.
Milk... ..	52	Nil
Cream ... ..	2	1

Nature of preservative in each case in column (b) and action taken under the Regulations in regard to it—boric acid 0.074%

A warning was sent from the Public Health Committee to the vendor.

## 2. Cream sold as Preserved Cream:—

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label, as to preservative, were correct—

(i) Correct statements made .....	8
(ii) Incorrect statements made .....	Nil
(iii)	

No. of Sample.	Percentage of Preservative found in each sample.	Percentage stated on Statutory Label.
48	0.24 %	Not exceeding 0.4 % Boric Acid.
49	0.22 "	
50	0.25 "	
51	0.25 "	
84	0.22 "	
85	0.28 "	
86	0.25 "	
87	0.28 "	

(b) Determinations made of milk fat in cream sold as preserved cream—

(i) Above 35 per cent. ....	8
(ii) Below 35 per cent. ....	Nil

- (c) Instances where, apart from analysis, the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed ..... I
- (d) Particulars of each case in which the Regulations have not been complied with and action taken  
 Sample was sold in carton without declaratory label.
3. Thickening substances:—  
 Any evidence of their addition to cream or preserved cream. Action taken where found ..... Nil
4. Other observations, if any ..... Nil

#### PUBLIC ANALYST'S REPORT.

The following is the report of the City Analyst:—

Assay Office,

Chester, April 9th, 1927.

To the Chairman and Members of the Public Health Committee.  
 Ladies and Gentlemen,

The following are the results of analyses made during the year ended December 31st, 1926. The total number of samples analysed amounts to 123. This includes two samples of rag flock and two of milk taken direct from the cows. One hundred and one of the samples were formal; 21 informal; and 1 from a private person. The details of the samples will be found in the tabular report.

Twelve samples were adulterated. Seven of these were milk; 2 American Apples; 2 tinned green peas; and 1 cream.

Three milk samples contained added water; the other 4 were deficient in fat. One of these was an informal one. The samples taken direct from the cows were of good quality, and confirmed the adulteration. Taking into account that 7 samples out of 54 were below the milk standards, which are very low ones, the milk for the year is not very satisfactory, for one sample in every eight is an unsatisfactory one.

The two samples of tinned green peas had been coloured with copper, and contained an amount of copper equal to one grain of copper sulphate per lb. Under the new Food Regulations the use of copper for colouring food is totally prohibited.

Seven samples of American apples were examined, and two were found to contain arsenic. The amount present was very small, but after the experience some years ago of the arsenical beer poisoning, where the amount of arsenic was also very small, the use of arsenic appears to be a dangerous practice.

The adulterated cream sample was one sold as unpreserved cream, but which contained boric acid.

A number of tinned foods were examined, particularly for lead and tin. Lead was absent in all, and the largest amount of tin amounted to 0.95 grain per lb. The limit for tin in food is 2 grains per lb.

All the samples of jam were satisfactory, and were free from preservatives and from coaltar dyes.

One sample of butter contained boric acid. All the other butters were free from preservatives, and were satisfactory.

The amount of boric acid in the preserved cream samples was well within the limit allowed, and they were free from any thickening agents.

The custard powders consisted of maize flour coloured with a coal tar dye. The name of these articles is very misleading, as they are not true custard.

Three samples of cream of tartar were examined, and one found to contain the full limit for arsenic allowed by the British Pharmacopœia. The other two samples were satisfactory.

The two samples of rag flock were very satisfactory.

Yours faithfully,

W. F. LOWE, A.R.S.M., F.I.C.,

City Analyst.

THE CITY OF THE COUNTY OF THE CITY OF CHESTER.

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SALE OF FOOD AND DRUGS ACTS.

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Report of the Public Analyst upon the articles analysed by him during the year ended 31st December, 1926.

ANALYSES.									
Article.	Number Examined.			Number Adulterated, &c.			ADULTERATED SAMPLES, &c.		
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
Milk ...	48	6		54	6	1		7	Serial No.
Apples...		7		7		2		2	Milk
Butter...	10			10					Do.
Lard ...	2			2					Do.
Currants	3			3					Do.
Raisins	3			3					Do.
Cream ...	2			2					Do.
Preserved Cream	8			8	1			1	Do.
Jam ...	6			6					Do.
Condensed Milk	2			2					Do.
Custard Powder	2			2					Do.
Baking Powder	2			2					Do.
Self Raising Flour	1			1					Do.
Flour ...	1			1					Do.
White pepper...	2			2					Do.
Rice ...	2			2					Do.
Malt Vinegar ...	1			1					Do.
Cream of Tartar	3			3					Do.
Coffee and Milk			1	1					Do.
Bottled Peas	...				...			...	Do.
Tinned Peas	1	1		2	1	1		2	Do.
" Pork & Beans	...	3		3	...	...		...	Do.
" Tomatoes	...	2		2	...	...		...	Do.
" Sardines	...	1		1	...	...		...	Do.
Rag Flock ...	2	...		2	...	...		...	Do.
Total	101	21	1	123	8	4		12	Do.

(Signed) W. F. LOWE, A.R.S.M., F.I.C.;  
City Analyst.

April 8th, 1927.

## Prevalence and Control over Infectious Diseases.

Measles and whooping cough were made notifiable on the first of the year, and the first-mentioned of those diseases was very prevalent; and in the last few months gave way to whooping cough as the most common notifiable disease.

Chickenpox continues to be prevalent, and occupies a considerable amount of time, as nearly all cases are visited so as to verify or, at least, share the responsibility of diagnosis.

Scarlet fever and diphtheria are less prevalent than some years ago, and on the whole are mild in character. Pneumonia is more frequently notified now, and fewer cases are discovered in the death returns.

Enteric fever was notified 8 times, being rather more prevalent than usual.

Malaria, dysentery or trench fever were not notified during the year.

The Schick and Dick tests for susceptibility to diphtheria and scarlet fever have not been used, except on the nursing staff at the Isolation Hospital, where those found susceptible are immunised. The nurses are also revaccinated and immunised against typhoid and para-typhoid.

For the detection of contacts, enquiries are made regarding the movements of all patients, and, if thought necessary, the class at school is examined for possible missed cases. In the case of diphtheria, all home contacts are examined bacteriologically and positive cases isolated. Before discharge from Hospital, noses and throats have to be clinically normal and have given a negative swab. Those bacterial tests are carried out at the Municipal Laboratory, as are also Widal tests in cases of suspected cases of typhoid, and the necessary tests are carried out for the absence of the typhoid germ on two occasions at weekly intervals.

The Medical Officer has not done any vaccinations or revaccinations except the revaccination of members of the nursing staff at the Isolation Hospital.

Disinfection of bedding and articles of clothing is done by steam in the case of all scarlet fever and diphtheria cases, and the infected room or rooms disinfected by spray or sulphur in the presence of moisture.



There is a disinfecting station at the Isolation Hospital, which has been used for the disinfestation of 11 persons during the year. There is a shampoo station at the school clinic for the disinfestation of heads.

Diphtheria and Scarlet Fever.—Nothing further need be said about those diseases, except that they have both been less prevalent than in 1925, 22 cases of diphtheria and 97 of scarlet fever having been notified. There was one death from scarlet fever, an infant a few months old suffering from septic scarlet fever. As a rule, the type of both diseases has been mild.

Diphtheria antitoxin is supplied free in necessitous cases, but the arrangement was not taken advantage of during the year.

Enteric fever was notified 8 times, a larger number than we have had for some years. Three of the cases were infected from a house where a patient was being treated for broncho-pneumonia, and it was their connection with this house which led to doubt of the diagnosis. Further details of the cases will be found at page 48.

Pneumonia.—The notification of this condition is being better carried out than formerly, and few cases now come to our notice through the death certificate. Ninety-five cases were notified or discovered.

Puerperal fever was notified twice, one of the cases proving fatal. There was no death from other causes connected with pregnancy or parturition. Acute poliomyelitis was notified once, in a child under school age. He had not been in contact with any suspicious case. Both his parents were in daily contact with a number of people in train and otherwise, but had not suffered in any way. The case was slight and made an excellent recovery.

Ophthalmia neonatorum was notified 8 times, but there was considerable doubt as to the true nature of the discharge in many of the cases. In seven, where a smear was examined microscopically, the characteristic diplococcus could not be found.

Cerebro-spinal fever was notified once, a case of a child under a year old. There was room for doubt as to the true diagnosis, the case only having been seen shortly before death.

Encephalitis lethargica was notified once, a military case. No source of infection could be traced. He made a good recovery, and a subsequent report states that there are no after-effects.

Measles was very prevalent during the year, 1,070 cases coming to the notice of the department. The epidemic spread over the whole town rapidly, and the attendances at every school were much affected. There were eight deaths during the year, or a mortality rate for known cases of 0·75 per cent., or a death rate of 0·19 per 1,000 living.

Whooping cough became more prevalent during the later months of the year, and 145 cases came to the notice of the department. There were 2 deaths, or a mortality rate of 1·3 for known cases, and a death rate of 0·04 per 1,000 living. Use is made of the district nurses in the home nursing of measles and whooping cough at times of epidemic, under an arrangement by which they are paid £50 a year.

Isolation Hospital. — Two hundred and ninety seven patients were admitted during the year. One hundred and ninety six belonged to the City, and 101 to outside Authorities.

Considerable trouble was experienced by the admission of double infections: Chickenpox was the chief complicating disease, and, developing shortly after admission, led to numerous ward infections. Mumps caused the same trouble, but to a less extent.

The following table sets out the admissions to hospitals during the year:—

	Tuber- culous Disease.	Scarlet Fever.	Diph- theria.	Typhoid Fever.	Puer- peral Fever.	Whoop- ing Cough.	Measles	Other Con- ditions.	Total.
Chester ...	34	93	19	6	1	4	21	18	196
County ...	17	...	...	...	...	...	...	...	17
Chester R.D.C.	...	25	1	...	...	...	...	3	29
Tarvin and Malpas	...	14	10	...	...	...	1	2	27
Hoole ...	...	7	...	...	...	...	...	...	7
Other Local Authorities	...	8	4	5	...	—	1	3	21
Total ...	51	147	34	11	1	4	23	26	297

Eleven cases were cleansed at the cleansing station—chiefly school children with body vermin.

The year's notifications of Infectious Diseases are given in the following table, the deaths being given in *italics*:—

DISEASE.	Under 1 year.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 35.	35 and under 45.	45 and under 65.	65 and over.	Total cases.	Cases admitted to Hospital.
Small Pox ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diphtheria ...	2 (1)	0	0	0	1	7	4	3	4	1	0	0	22 (1)	21
Scarlet Fever ...	2	1	5	6	6	40	15	8	11	2	1	0	97	91
Enteric Fever ...	0	0	0	0	0	2	1	1	2	0	2	0	8	7
Pneumonia ...	9 (7)	19 (6)	9 (1)	2 (1)	2	9	5	4 (1)	15 (1)	6 (3)	8 (10)	7 (4)	95 (34)	28
Erysipelas ...	0	0	0	0	0	0	0	1	2	2	4	5	14	1
Puerperal Fever ...	0	0	0	0	0	0	0	0	2 (1)	0	0	0	2 (1)	2
Acute Poliomyelitis ...	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Chicken Pox ...	8	8	15	6	25	159	18	5	1	0	0	0	245	1
Malaria ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophthalmia Neonatorum ...	8	0	0	0	0	0	0	0	0	0	0	0	8	2
Encephalitis Lethargica ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cerebro Spinal Fever... ..	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Measles ...	38 (1)	89 (5)	90 (1)	115 (1)	135	549	29	6	13	5	1	0	1070 (8)	23
Whooping Cough ...	20 (1)	21 (1)	10	10	15	63	3	0	3	0	0	0	145 (2)	5

The following are particulars of cases notified as ophthalmia neonatorum:—

Notified.	Cases.		Vision Unimpaired.	Vision Impaired.
	Treated			
	At Home.	In Hospital.		
8	6	2	8	0

Particulars of new cases of tuberculosis and mortality during 1926 are given below:—

Age Periods.	NEW CASES.				DEATHS.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0 ... ..	0	0	1	0	1	0	1	1
1 to 5 ... ..	0	1	2	0	1	1	1	1
5 to 10 ... ..	0	2	2	3	0	0	0	1
10 to 15 ... ..	1	1	1	3	1	0	0	0
15 to 20 ... ..	2	3	1	1	2	1	0	0
20 to 25 ... ..	2	3	0	0	4	0	1	0
25 to 35 ... ..	5	9	1	1	2	2	0	0
35 to 45 ... ..	9	6	0	0	8	3	0	0
45 to 55 ... ..	4	4	0	0	6	0	0	0
55 to 65 ... ..	5	0	0	0	5	0	0	0
65 and upwards	0	0	0	0	0	0	0	0
Totals ... ..	28	29	8	8	30	7	3	3

## PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS) REGULATIONS, 1925.

There has been no occasion to take action under those regulations.

### PUBLIC HEALTH ACT, 1925, SECTION 62.

The Public Health Committee have decided that they will exercise their powers under this section. So far there has been no occasion to put it into force.

### Canal Boats Acts, 1877 and 1884.

*STATISTICAL SUPPLEMENT to the (1926) Annual Report of the Chester Urban Sanitary Authority.*

1	Number of Boats added to Register in 1926 .....
Nil	Number re-registered owing to Structural Alterations ...
Nil	Number re-registered owing to other reasons .....

308	Total number registered to 31st December, 1926 .....
17	Total number of Registrations cancelled .....

291	Actual number of Boats on Register at 31st December, 1926
149	Number of Boats inspected in 1926.....
141	Number of Boats conforming to the Acts and Regulations...
8	Number of Boats infringing the Acts and Regulations ...

Total number for which the Cabins were registered—508.

Total number occupying the Cabins .....	429
Details of occupation—Male Adults .....	166
Female Adults .....	127
Children of School Age .....	89
Children under School Age .....	47
—	429

Details showing Numbers Infringing in respect to:—

No. of Cases met with.		No. of Cases Remedied.
...	Registration .....	...
...	Notification of Charge of Master.....	...
1	Absence of Certificate .....	1
1	Certificate not Identifying Owner with Boat	1
1	Marking .....	1
...	Overcrowding .....	...
...	Partition (Regn. 8, b. ii.) .....	...
...	Females over 12 improperly occupying .....	...
...	Cleanliness .....	...
...	Painting .....	...
...	Ventilation .....	...
3	Dilapidation .....	3
...	Removal of Bilge Water .....	...
...	Without Pump .....	...
...	Refusal of Admittance to Inspector .....	...
2	No proper Water Vessel .....	2
...	Without requisite Double Bulkheads .....	..
...	Non-notification of Infectious Disease .....	...
...	Number of Boats detained for Cleansing (not for I/D) ...	...
8	Total Cases met with.	Total Cases remedied, 8

Number of Legal Proceedings taken .....	...
Number of printed Notice Forms issued .....	8
Number of Notices attended to .....	8
Number still corresponding about .....	...



CAUSES OF DEATH.	NET DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WITHIN OR WITHOUT THE DISTRICT.													Total Deaths whether "Non-Residents" or "Residents" in the District
	At all Ages.	Under 1 Year.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 35.	35 and under 45.	45 and under 65.	65 and upwards.	
All causes } Certified ...	...	...	...	...	...	...	...	...	...	...	...	...	...	
} Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	
1 Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	
2 Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	
3 Measles	8	1	5	1	1	...	...	...	...	...	...	...	...	
4 Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	
5 Whooping Cough	2	1	1	...	...	...	...	...	...	...	...	...	...	
6 Diphtheria and Croup	1	1	...	...	...	...	...	...	...	...	...	...	...	
7 Influenza	8	...	...	...	...	...	...	...	...	...	...	...	...	
8 Erysipelas	...	...	...	...	...	...	...	...	...	...	...	4	1	
9 Phthisis (Pulmonary Tuberculosis)	37	1	1	...	...	1	...	1	3	8	11	11	...	
10 Tuberculous Meningitis	4	2	1	...	...	...	...	...	...	...	...	...	...	
11 Other Tuberculous Disease	2	...	1	...	...	...	...	...	...	...	...	...	...	
12 Cancer, Malignant Disease	60	...	...	...	...	...	...	...	...	1	6	...	25	
13 Rheumatic Fever	1	...	...	...	...	...	...	...	...	...	...	...	1	
14 Meningitis	2	1	...	...	...	1	...	...	...	...	...	...	...	
15 Organic Heart Disease	50	...	...	...	...	...	...	1	...	...	3	20	35	
16 Bronchitis	56	4	4	...	...	...	...	...	...	1	2	13	32	
17 Pneumonia (all forms)	34	7	6	1	1	...	...	...	1	1	3	10	4	
18 Other Diseases of Respiratory Organs	10	...	...	...	...	...	...	...	...	...	...	5	4	
19 Diarrhoea and Enteritis	10	9	1	...	...	...	...	...	...	...	...	1	...	
20 Appendicitis and Typhlitis	5	...	...	...	...	...	...	...	1	1	...	1	1	
21 Cirrhosis of Liver	1	...	...	...	...	...	...	...	...	...	...	...	...	
22 Nephritis and Bright's Disease	14	...	...	...	...	...	...	...	...	...	1	6	7	
23 Puerperal Fever	1	...	...	...	...	...	...	...	...	1	...	...	...	
24 Other Accidents & Diseases of Pregnancy & Parturition	3	2	...	...	...	...	...	...	...	1	...	...	...	
25 Congenital Debility and Malformation, including Premature Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	
26 Violent Deaths, excluding Suicide	23	22	1	...	...	...	...	...	...	...	...	...	...	
27 Suicide	19	...	1	...	...	...	...	2	2	4	2	4	3	
28 Other Defined Diseases	4	...	...	...	...	...	...	...	...	1	...	1	2	
29 Diseases ill-defined or unknown	181	16	3	...	...	1	...	1	1	7	6	38	108	
Totals	546	67	25	2	2	3	3	5	8	29	36	142	224	

# Infant Mortality during the Year 1926.

CAUSES OF DEATH		Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total Deaths 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 9 Months	9 Months and under 12 Months	Total Deaths under 1 Year
All Causes { Certified, Uncertified.		15 ..	3 ..	1 ..	3 ..	22 ..	12 ..	18 ..	8 ..	7 ..	67 ..
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	..
Measles ..	..	..	..	..	..	..	..	1	..	..	1
Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough ..	..	..	..	..	..	..	..	1	..	..	1
Diphtheria and Croup ..	..	..	..	..	1	1	..	..	..	..	1
Erysipelas ..	..	..	..	..	..	..	..	..	..	..	1
Tuberculous Meningitis ..	..	..	..	..	..	..	..	..	..	..	..
Abdominal Tuberculosis (b) ..	..	..	..	..	..	..	..	1	1	..	2
Other Tuberculous Diseases ..	..	..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) ..	..	..	..	..	..	..	..	..	..	1	1
Convulsions ..	..	1	2	..	..	3	1	1	..	..	1
Laryngitis ..	..	..	..	..	..	..	..	3	..	..	7
Bronchitis ..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia (all forms) ..	..	..	..	..	..	..	..	2	..	2	4
Diarrhoea ..	..	..	..	..	1	1	1	2	2	2	7
Enteritis ..	..	..	..	..	..	..	1	..	..	..	2
Gastritis ..	..	..	..	..	..	..	1	..	..	..	..
Syphilis ..	..	..	..	..	..	..	..	4	1	1	7
Rickets ..	..	1	..	..	..	1	..	1	1	1	3
Suffocation, Overlying ..	..	..	..	..	..	..	..	..	..	1	1
Injury at Birth ..	..	..	..	..	..	..	..	..	..	..	..
Atelectasis ..	..	3	..	..	..	3	..	..	..	..	..
Congenital Malformations (c) ..	..	1	1	..	..	1	1	..	..	..	3
Premature Births ..	..	1	1	..	..	1	1	..	..	..	1
Atrophy, Debility and Marasmus ..	..	7	1	..	..	8	6	..	..	..	2
Other Causes ..	..	1	..	1	1	1	..	1	3	..	9
Totals ..	..	15	3	1	3	22	12	18	8	7	67

Nett Births in the year, legitimate, 836; illegitimate, 45.

Nett Deaths in the year of legitimate infants, 61; illegitimate infants, 6.

## Vital Statistics of Whole District during 1926 and previous years.

YEAR	Population estimated to Middle of each Year	BIRTHS		TOTAL DEATHS REGISTERED IN THE DISTRICT			TRANSFERABLE DEATHS		NETT DEATHS BELONGING TO THE DISTRICT			
		Un- corrected Number	Nett	Rate	Number ‡	Rate	Of Non- residents registered in the District	Of Resi- dents not registered in the District	Under 1 Year of Age		At all Ages	
									Number †	Rate per 1000 Nett Births	Number †	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1917	40,718 (B) 40,218 (D)	735	744	18.49	576	14.4	68	69	62	83.3	577	14.4
1918	40,718 (B) 40,218 (D)	744	744	22.65	680	18.67	119	112	67	90.05	673	16.66
1919	42,464 (B) 40,764 (D)	759	759	17.87	562	13.78	97	84	64	84.32	549	13.47
1920	42,571 (B) 42,388 (D)	1072	1091	25.62	543	12.81	94	70	75	68.7	519	12.24
1921	41,407	882	895	21.63	595	14.36	91	81	79	88.26	585	14.12
1922	41,451	897	865	20.86	608	14.66	113	77	68	78.6	572	13.79
1923	41,610	829	807	19.22	600	14.41	132	78	69	86.2	546	13.12
1924	41,932	835	816	19.46	578	13.78	116	115	73	89.46	577	13.76
1925	41,922	869	851	20.30	593	14.12	155	128	61	71.6	566	13.5
1926	41,913	873	836	19.94	569	13.31	136	113	67	80.0	546	13.0

Area of District in acres (land and inland water), 2,862.

No. of inhabited houses, 8,910.

Average No. of persons per house, 4.7.

\* Total deaths occurring in Chester whether of residents or non-residents.

† Births and deaths corrected for those births and deaths properly belonging to Chester, but occurring outside the District, or occurring in the District but properly belong outside.

# Administration of the Factory and Workshop Acts, 1901 & 1907

IN CONNECTION WITH

## Factories, Workshops, Laundries, Workplaces, and Homework.

### 1. INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF  
NUISANCES.

Premises. (1)	Number of		
	Inspections (2)	Written Notices (3)	Prosecutions (4)
Factories (including Factory Laundries) ...	37	3	—
Workshops (including Workshop Laundries) ...	190	12	—
Workplaces (other than Outworkers' premises)	25	—	—
Total ... ..	252	15	—

### 2. DEFECTS FOUND.

Particulars. (1)	No. of Defects.			Number of Prosecu- tions. (5)
	Found (2)	Remed'd (3)	Referred to H.M. Inspect'r (4)	
Nuisances under the Public Health Acts—				
Want of Cleanliness ... ..	5	5	—	—
Want of Ventilation ... ..	1	1	—	—
Overcrowding ... ..	2	2	—	—
Other Nuisances ... ..	15	15	—	—
Sanitary accommodation { insufficient ... ..	2	2	—	—
unsuitable or defective ... ..	—	—	—	—
not separate for sexes ... ..	—	—	—	—
Offences under the Factory & Workshop Act :				
Other Offences ... ..	9	9	—	—
Total ... ..	34	34	—	—

### OUTWORK IN UNWHOLESOME PREMISES.

SECTION 108.

Nature of Work. (1)	Instances (2)	Notices Served. (3)	Prosecutions. (4)
Wearing Apparel.—			
Making and C. ... ..	Nil	Nil	Nil
Cleaning and Washing ... ..	"	"	"